

REMARKS

Status of the Claims

In accordance with the foregoing, claims 1-18 are pending in the application. It is respectfully submitted that the Examiner's rejections are traversed.

Rejections Under 103

Claims 6, 8, 12-15 and 17 are rejected under 35 USC 103(a) as being unpatentable over Noguchi et al (6,519,507) in view of Karakama et al (WO 90/06836)

Claim 6 recites:

A teaching position correcting apparatus for correcting a teaching point position of a robot operation program, comprising:

work tool moving/stopping means allowing a work tool ... to move toward a teaching point of said robot operation program, and to **automatically stop** said work tool **before it reaches the teaching point** (emphasis added).

Noguchi et al. states that when the button 9a is pressed after selecting the button 8d, the robot 2 travels on the travelling track 1 until the distance between the coordinate origin 3 and the movement target point is minimized **and the robot 2 travels until the robot 2 directly faces** the movement target point 7. See col. 4, lines 1-6. It is respectfully submitted that the Examiner is interpreting the target point 7 as the "teaching point" of claim 6. Even though the distance between the coordinate origin 3 and the movement target point is minimized, the robot 2 does not stop **before** it reaches the target point. To the contrary, the robot 2 travels until it **directly faces** the target point.

Furthermore, Noguchi relates to a robot **off-line teaching system**, determining automatically the position on a traveling track 1 at which a robot 2 (traveling on the traveling track) stays. This robot 2 has three degrees of robot positions and one degree of traveling track. For teaching the positions of the robot, it is first necessary to determine the position on a traveling track 1 at which the robot 2 stays. But, the position on the traveling track 1 at which the robot 2 stays can be selected to any position as far as a target point falls within the robot arm operation range. Noguchi discloses automatically determining the position on the traveling track 1 to which the robot 2, having degrees of freedom, is caused to travel. Noguchi only discloses **how to determine the position on a traveling track on which the robot stays**.

Noguchi et al. fails to teach or suggest “A **teaching position correcting apparatus** for correcting a teaching point position of a robot operation program, comprising a work tool moving/stopping means allowing a work tool ... to move toward a teaching point of said robot operation program, and to **automatically stop** said work tool **before it reaches the teaching point**” (emphasis added).

Karakama et al. relates to a robot operation method which enables the teach point taught in advance to the robot to be manually corrected during the automatic operation of the robot without using a visual sensor. Karakama et al. fails to teach or suggest a “work tool moving/stopping means for allowing a work tool ... to move toward a teaching point of said robot operation program, and to **automatically stop** said work tool **before it reaches the teaching point**” (emphasis added).

Accordingly, claim 6 patentably distinguishes over the cited art.

Claims 8 and 12-14 depend from claim 6 and include all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguish over the cited art.

In view of the above arguments, claim 15 patentably distinguishes over the cited art.

Claim 16 depends from claim 15 and includes all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguishes over the cited art.

Claim 17 recites:

A teaching position correcting apparatus for correcting a teaching point position of a robot operation program, comprising:

work tool moving/stopping means allowing a work tool ... to move toward a teaching point of said robot operation program and to **automatically stop** said work tool when the distance between said work tool and said teaching point **becomes shorter than a predetermined distance** (emphasis added).

Accordingly, claim 17 patentably distinguishes over the cited art

Claims 7 is rejected under 35 USC 103(a) as being unpatentable over Noguchi et al and Karakams et al. and further in view of Watanabe et al (6,763,384). Claim 7 depends from claim 6 and includes all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguishes over the cited art. Furthermore, nothing has been cited or found in Watanabe et al. that cures the deficiencies in regards to Noguchi et al. and Karakama et al.

Claims 9 and 11 are rejected under 35 USC 103(a) as being unapentable over Nogouchi et al. and Karakama et al. and further in view of Barrows (4,626,013). Claims 9 and 11 depend from claim 6 and include all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguish over the cited art. Furthermore, nothing has been cited or found in Barrows that cures the deficiencies in regards to Noguchi et al. and Karakama et al.

Claim 10 is rejected under 35 USC 103(a) as being unapatentable over Noguchi et al. and Karakama et al and further in view of Flora (6,014,909). Claim 10 depends from claim 6 and includes all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguishes over the cited art. Furthermore, nothing has been cited or found in Flora that cures the deficiencies in regards to Noguchi et al. and Karakama et al.

Claim 16 is rejected under 35 USC 103(a) as being unaptentable over Noguchi et al. and Karakama et al. and further in view of Watanabe et al. Claim 16 depends from claim 15 and includes all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguishes over the cited art. Furthermore, nothing has been cited or found in Watanabe that cures the deficiencies in regards to Noguchi et al. and Karakama et al.

New Claim

New claim 18 recites "moving a work tool mounted on an arm tip end of a robot toward a teaching point of a robot operation program and **automatically stopping the work tool before it reaches the teaching point**" (emphasis added). None of Noguchi et al, Karakams et al., Watanabe et al., Flora, and Barrows teaches or suggests correcting a teaching position in this manner. It is respectfully submitted that new claim 18 patentably distinguishes over the cited art.

Summary

It is submitted that none of the references, either taken alone or in combination, teach the present claimed invention. Thus, claims 6-18 are deemed to be in a condition suitable for allowance. Reconsideration of the claims and an early notice of allowance are earnestly solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

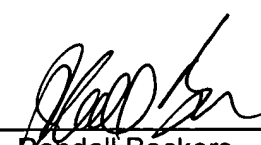
Respectfully submitted,

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8/20/18

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